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HARBOR GATEWAY CENTER

ELECTRIC AND TELECOMMUNICATIONS INFRASTRUCTURE STUDY

DECEMBER 11, 1996

UTILITY SPECIALISTS SOUTHWEST, INC.

HARBOR GATEWAY CENTER
CAPITAL COST ESTIMATES FOR
ELECTRIC AND TELECOMMUNICATIONS INFRASTRUCTION TO
ACHIEVE A MARKET PLACE ADVANTAGE

EXECUTIVE SUMMARY

Strategy: A market place advantage for this project can be achieved by means of "direct access" to deregulated electric power and a 21st Century telecommunications infrastructure system within the project.

Implementation Assumptions:

"Direct Access" to competitive brokered power will be accomplished through the current electric service provider, Los Angeles Department of Water and Power, and its project electric infrastructure or by others with Developer controlled electric infrastructure.

A 21st Century telecommunications infrastructure will consist of multiple and competing delivery systems via parallel street, private property and building infrastructure controlled by the Developer.

Control Priorities:

The first priority is to accomplish the strategic objective through electric and telecommunications infrastructure owned, operated and maintained by someone other than the Developer. In the event this priority is not achievable, the Developer will be the infrastructure provider.

Developer Control of Infrastructure:

The means and methods to isolate LADWP and control the electric infrastructure within this project requires investigation beyond the scope of this report. It is generally speculated that development of the project as a single parcel and/or services provided through a system of private streets could isolate LADWP from the project.

Scope of this Report:

This report will cover preliminary infrastructure development scenarios and related costs. Each scenario and cost estimate is supported by a related concept electric or telecommunications design.

Electric Infrastructure Scenario 1:

LADWP will provide direct access to brokered power under its current rules for electric service. The Developer will be responsible to provide all trench, conduit, substructures (vaults, manholes, boxes, equipment pads, etc.) at Developer's expense. LADWP will provide all cables, transformers and related equipment at its expense if electric revenues to support such an investment are concurrent with the investment; otherwise the Developer will advance these costs with some opportunity for refund based on future project electric revenues.

Estimated cost of Developer provided LADWP infrastructure:	$1,524,900
Estimated cost to Cable project (May be Refundable):	$1,903,900
Estimated Total LADWP Electric infrastructure Cost:	$3,428,800

EXECUTIVE SUMMARY (cont.)

Electric Infrastructure Scenario 2:

Under this scenario, direct access to brokered electric power will be provided by Developer controlled electric infrastructure. The City of Los Angeles will allow Developer and Southern California Edison or other electric utility company, to "joint venture" the development of an electric distribution system based on that utility's design, construction and operating standards.

Estimated cost for distribution infrastructure:	$2,003,400
Estimated cost for Substation to receive brokered power:	$3,852,500
Estimated Total cost for "Code" electric system:	$5,855,900

Electric Infrastructure Scenario 3:

Under this scenario direct access to brokered electric power will be provided by Developer controlled electric infrastructure. The City of Los Angeles through its code powers will require a Developer electric distribution system to meet National Electric Code construction and operating requirements.

Estimated cost for distribution infrastructure:	$2,875,000
Estimated cost for Substation to receive brokered power:	$3,852,500
Estimated Total cost for "Code" electric system:	$6,727,500

Role of Existing Electric Substation:

As demonstrated by the above estimates of the replacement cost for a substation ($3,852,500), and its strategic value in isolating LADWP and as a source of deregulated electric power, it may be in McDonnell Douglas' interest to reconcile dispute over ownership of this facility in its favor.

Direct Access to electric power:

California electric deregulation legislation (AB1890) requires that the local regulatory body (Los Angeles City Council) determine authorization for direct transactions between electricity suppliers and end use customers. It is the opinion (Appendix 1 Memorandum) of our CPUC counsel, Mr. James Squeri, that LADWP will be motivated to allow direct access because of legislative and public pressure for lower cost electric energy. Mr. Squeri's opinion memorandum also points out that participation in electric deregulation provides LADWP a means by which to recover investments in noncompetitive facilities.

Estimated Electric Energy Revenue at Build out:

Based on an LADWP electric rate of $.0789 per kilowatt hour, and estimated electric demands from Exhibit E-6 we estimate that the project will generate approximately $5,250,000 at build out.

With respect to capital recovery of electric system investments, existing utility companies will be permitted to recover "stranded utility investment" through "nonbypassable" surcharges to direct access power during the first five (5) years of electric deregulation. As recommended in our December 11 Work Plan and priority outline, the next phase of study will address and analyze criteria for capital recovery based on decisions made with respect to the infrastructure information addressed in this study.

EXECUTIVE SUMMARY (cont.)

Telecommunications Infrastructure Scenario:

The recommended strategy for 21st Century telecommunications capability within Harbor Gateway Center is based on accommodating multiple service providers. This report addresses infrastructure design criteria and related construction cost for three (3) competing distribution networks: a traditional Pacific Bell copper/fiber system, a GTE type "Smart Park" fiber and infrastructure for lease to another service provider. This report focuses only on distribution facilities within project streets, corresponding building site and building. Telecommunications criteria will be the subject of future study.

Estimated cost of Pacific Bell copper/fiber private street infrastructure:	$ 527,600*
Estimated cost of "Smart Park" street infrastructure: + $30,000 to $80,000 for fiber terminal at each building	$ 398,800
Estimated cost of infrastructure for lease:	$ 271,400

* The developer is responsible for cable costs estimated at $270,400 for a private street scenario that is presumed to facilitate a direct access electric energy strategy. If Pacific Bell facilities are installed in Public streets, Pacific Bell is responsible for cable costs.

Recommended follow up priorities:

- Determine fiscal and Real Estate market advantages from potential "spread" between LADWP electric rates and other suppliers' rates plus cost of transmission and "nonbypassable" surcharges. Develop operating and maintenance cost proforma for "private electric distribution infrastructure, substation/switching and building interface requirements.

- Provide technical support to determine political and project approval implications associated with energy services from provider(s) other than LADWP. Participation in Electric Industry Deregulation & Restructuring Legislative and CPUC workshops at some level of effort to maintain an adequate information and knowledge base relative to the above issues and those of potential importance that will evolve.

- Develop conceptual building criteria for inter-building "fiber rings". Develop conceptual criteria for ground and building Microwave and Satellite facilities. Investigate existing Pacific Bell and Cable TV infrastructure and service capabilities that will provide the external project infrastructure and service interfaces.

HARBOR GATEWAY CENTER

LIST OF EXHIBITS & APPENDICES

HARBOR GATEWAY CENTER

EXHIBIT # E-1
ELECTRICAL LOAD ASSUMPTIONS

ASSUMPTIONS

- The project consists of two distinct elements: A) a commercial shopping center consisting of 40 acres with a maximum of 450,000 square feet of building space, and B) a 156± acre commercial/industrial park yielding a maximum of 2,957,700 square feet of building space.
- For the purposes of electric demand estimating, we have assumed 1/3 of the total available square feet of the commercial/industrial park to be Manufacturing/Production type facilities.
- For the purposes of electric demand estimating, we have assumed 1/3 of the total available square feet of the commercial/industrial park be Low-Rise Commercial type facilities.
- For the purposes of electric demand estimating, we have assumed 1/3 of the total available square feet of the commercial/industrial park to be Mid-High Rise Commercial type facilities.
- The shopping center was assumed to be a standard neighborhood facility with several majors, some in-line shops, and out-parcels for fast food outlets, sit down restaurants, banks, and/or automotive service shops.

ELECTRICAL LOAD ANALYSIS

MAXIMUM SIZE OF BUILDINGS	ASSUMED TYPE OF BUILDINGS	CONNECTED WATTS/SQ. FT.	TOTAL CONNECTED LOAD (kW)	UTILITY ESTIMATED DEMAND (kVA)	ELECTRIC "CODE" ESTIMATED DEMAND (kW)
985,900 sq.ft.	Industrial	25	24,648	11,240	18,486*
985,900 sq.ft.	Commercial (High Rise)	15	14,789	4,634	9,909**
985,900 sq.ft.	Commercial (Low Rise)	15	14,789	8,380	9,909**
450,000 sq.ft.	Shopping Center			2,960	
3,407,700 sq.ft.			**54,226**	**27,214**	**38,304**

* Average Demand factor used is 75% per National Electrical Codes (NEC) minimums (average).

** Average Demand factor used is 67% per NEC minimums (average).

Date: December 17, 1996
OWNER: McDonnell Douglas Realty Company
PREPARED BY: Utility Specialists Southwest, Inc. and Turpin & Rattan Engineering, Inc.

HARBOR GATEWAY CENTER

EXHIBIT # E-2.1

ELECTRICAL SYSTEM DESIGN PARAMETERS & ASSUMPTIONS
LOS ANGELES DEPARTMENT OF WATER & POWER (LADWP)

PLANS WERE SUBMITTED TO LADWP FOR THEIR USE IN PREPARING A CONCEPT ELECTRIC DESIGN (SEE EXHIBIT # E-3.1). LADWP USED THEIR OWN DEMAND ESTIMATING AND SYSTEM SIZING CRITERIA TO PRODUCE THE DESIGN. THEIR SYSTEM AND RELATED COSTS IS COMPRISED OF:

- Source of electric service from LADWP is the existing substation at the south end of lot 22. Additional circuits will be accessed via cable poles on 190th Street and Normandie Avenue.
- The backbone system will be energized at 34.5 kV. Each lot/customer will require a step-down transformer from 34.5 kV to 4.8 kV and additional transformation to the desired serving voltage.
- The basic system will be 6-6" conduits for the distribution backbone. Each lot will require conduit stubs of 2-5" and 1-4" for future extension to the actual buildings. Certain areas of the project will have multiples of these conduits. The large conduit requirements and LADWP policy will not allow the electric system to be installed in a joint trench with telecommunications or natural gas utilities.
- The Developer is required to provide all trench, conduit, backfill, and concrete substructures per the LADWP Design.
- LADWP will provide all cabling on an "as needed" basis at the Developer's expense. Credits for expected electric revenues coincident with the installation of electric cables may be applied at LADWP's discretion to off-set Developer's advances for cabling.

Date: December 17, 1996
Owner: McDonnell Douglas Realty Company
Prepared by: Utility Specialists Southwest, Inc.

HARBOR GATEWAY CENTER

EXHIBIT # E-2.2

ELECTRICAL SYSTEM DESIGN PARAMETERS & ASSUMPTIONS
SOUTHERN CALIFORNIA EDISON (SCE)

AS AN OPTION TO AN LADWP ELECTRIC SYSTEM, WE HAVE CHOSEN TO EVALUATE DEVELOPER OWNED ELECTRIC DISTRIBUTION SYSTEMS. ONE OF THE TWO SYSTEMS STUDIED IS BASED ON THE FOLLOWING SOUTHERN CALIFORNIA EDISON DESIGN AND OPERATING STANDARDS.

- We have chosen SCE to evaluate because it is a CPUC regulated electric company with existing facilities in Western Avenue along the project westerly boundary. Edison also provides operating and maintenance services for privately owned electric systems.

TYPICAL SCE DESIGN PARAMETERS AND ASSUMPTIONS:

- Total estimated demand loads, using SCE demand estimating parameters (See EXHIBIT #E-1), will require four separate circuits.
- All circuits would be served from the two 40 mVA transformers in the new substation design shown on EXHIBIT #E-4.
- System reliability would be provided by circuit tie-switches and a looped primary configuration. This would allow rapid service restoration in an outage condition.
- A spare conduit is provided for the backbone distribution feeder system for maintenance purposes.
- This system design would be compatible with natural gas and telecommunications joint trench configurations.
- The entire cost of the system including cable, connections, and electrical hardware belongs to the Developer in this scenario.
- Lots with anticipated demands of 1000 kVA or more would be served directly from the feeder cable. Smaller lots and loads are fuse protected in blocks of 1500 kVA.

Date: December 17, 1996
Owner: McDonnell Douglas Realty Company
Prepared by: Utility Specialists Southwest, Inc.

HARBOR GATEWAY CENTER

EXHIBIT # E-2.3

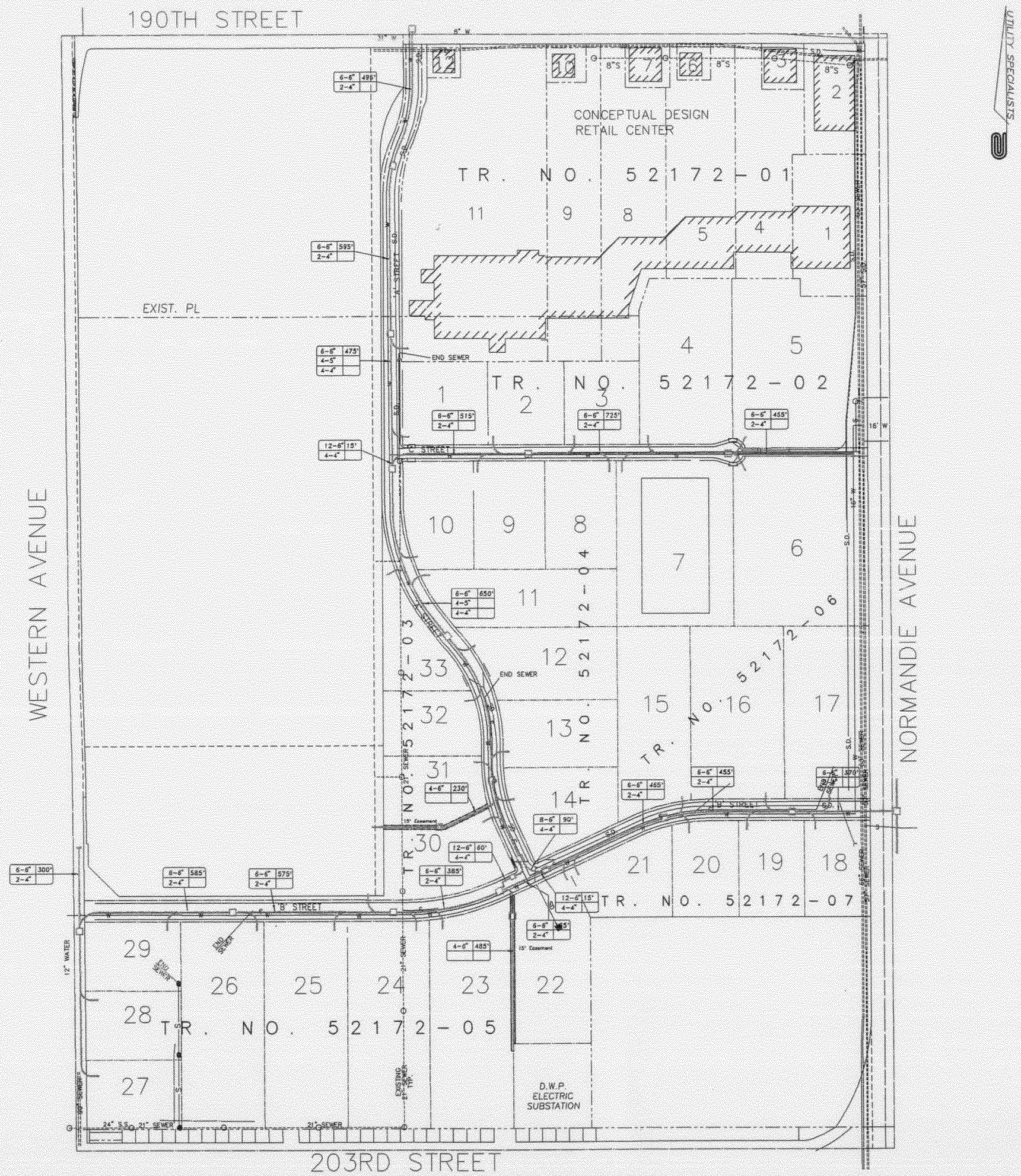
NATIONAL ELECTRICAL CODE (NEC) PRIVATE DISTRIBUTION SYSTEM ELECTRICAL SYSTEM DESIGN PARAMETERS & ASSUMPTIONS

AS AN OPTION TO AN LADWP ELECTRIC SYSTEM, WE HAVE CHOSEN TO EVALUATE DEVELOPER OWNED ELECTRIC DISTRIBUTION SYSTEMS. THIS EXHIBIT OUTLINES DESIGN CRITERIA FOR A SYSTEM BASED ON THE NATIONAL ELECTRICAL CODE (NEC). IN THE EVENT THAT AN ALTERNATIVE TO LADWP IS DESIRABLE, THE CITY OF LOS ANGELES COULD REQUIRE THE ALTERNATIVE BE CONSTRUCTED AND OPERATED UNDER NATIONAL ELECTRIC CODE CRITERIA.

TYPICAL NATIONAL ELECTRICAL CODE PRIVATE DISTRIBUTION SYSTEM

- Built in reliability and source for brokered power using two available LADWP 138 kV transmission lines and two 40 mVA, 138 kV/12.5 kV oiled filled transformers.
- Additional reliability and alternate source for brokered power by providing space for a future connection to an available 66 kV transmission line.
- Utility metering at 138 kV for the Landlord.
- Landlord metering at 480 V for each tenant.
- Six (6) 12.5 kV circuits to various points on the site.
- Six (6) 12.5 kV switches at different locations on the site.
- Twelve (12) 12.5 kV power step down transformers to 480/277 V utilization level voltage.

Date: December 17, 1996
Owner: McDonnell Douglas Realty Company
Prepared by: Turpin & Rattan Engineering, Inc.



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NO.	REVISIONS	DATE:

SCALE:
DATE: 12/11/96
JOB:

HARBOR GATEWAY CENTER
L.A.D.W.P. CONCEPT ELECTRICAL
SITE DISTRIBUTION LAYOUT

EXHIBIT #:
E-3.1

BOE-C6-0064093

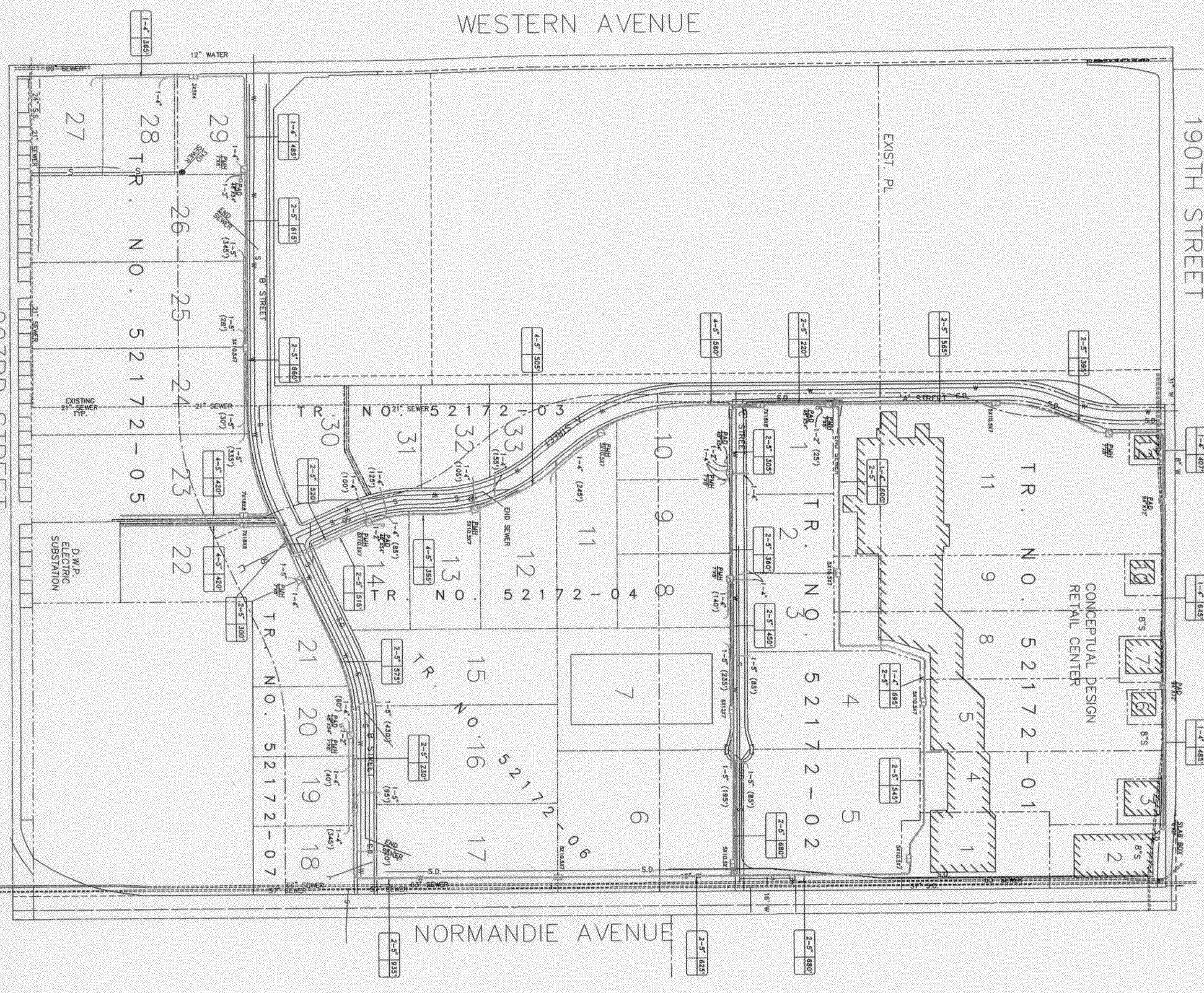

EXHIBIT # **E-3.2**

HARBOR GATEWAY CENTER
SCE CONCEPT ELECTRICAL SITE DISTRIBUTION LAYOUT

SCALE:	
DATE:	12/11/96
JOB:	

NO.	REVISIONS	DATE:

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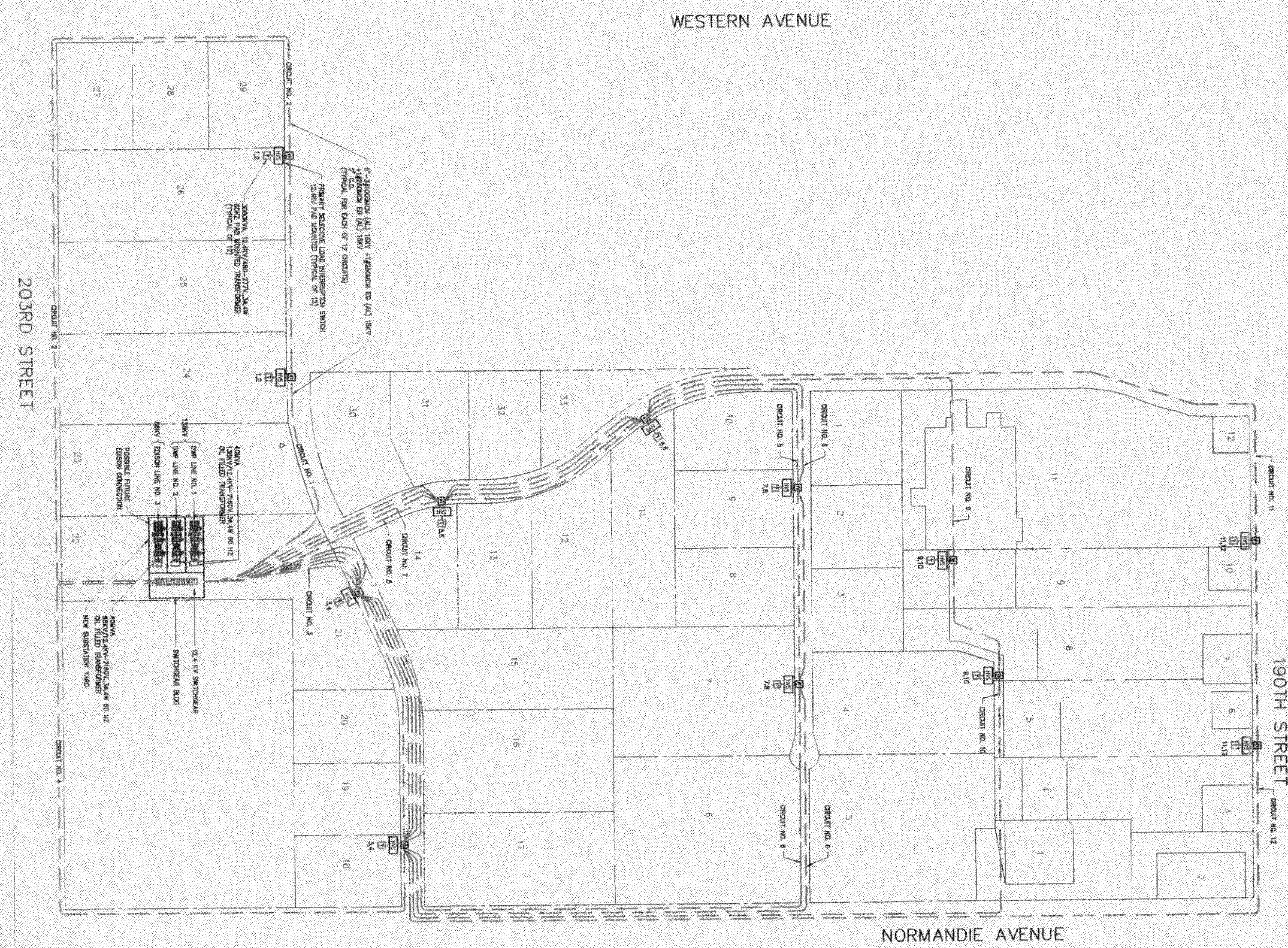

HARBOR GATEWAY CENTER

McDONNELL DOUGLAS REALTY

SITE DISTRIBUTION LAYOUT

EXHIBIT # E-3.31

SCALE:
DATE
JOB:

NO.	REVISIONS	DATE

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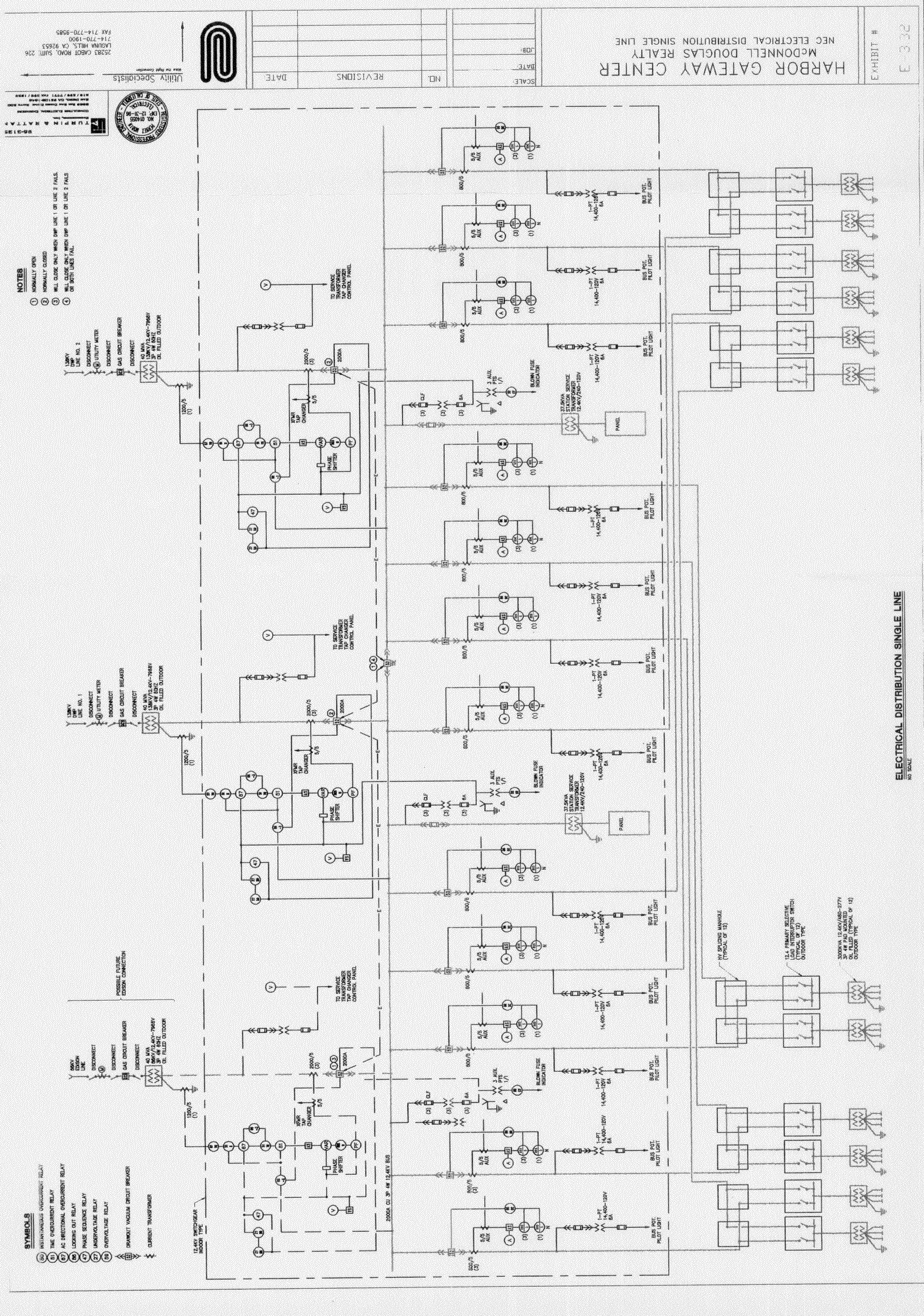
FAX 714-770-9585

REGISTERED PROFESSIONAL ENGINEER
NO. 014055
EXP. 12-31-96
ELECTRICAL
STATE OF CALIFORNIA

TURPIN & RATTAN Engineering, Inc.
Consulting Electrical Engineers
96-213



HARBOR GATEWAY CENTER
McDONNELL DOUGLAS REALTY
NEC ELECTRICAL DISTRIBUTION SINGLE LINE
EXHIBIT #
E 332
SCALE:
DATE:
JOB:
NO.
REVISIONS
DATE
Utility Specialists
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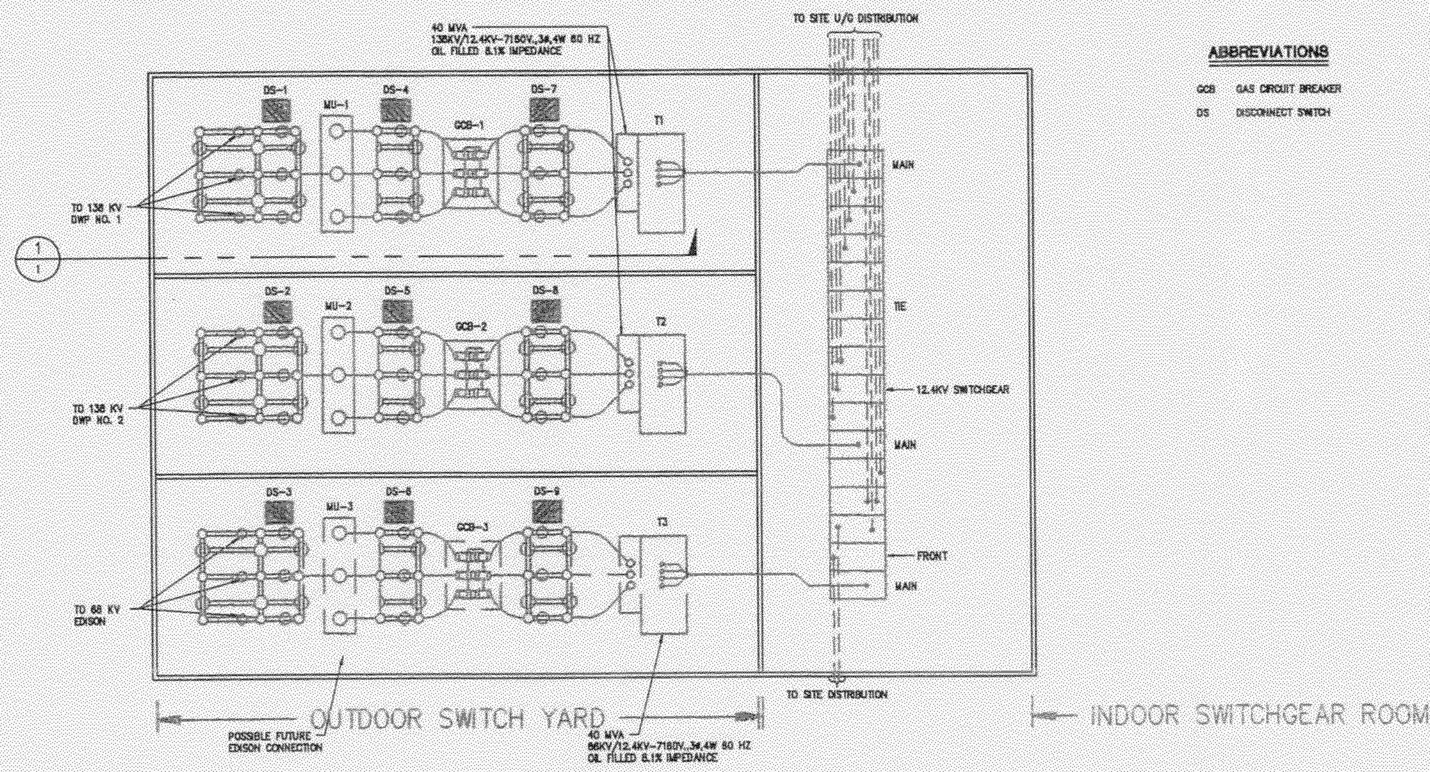
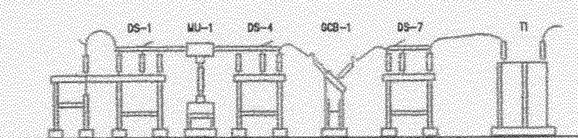
LAGUNA HILLS, CA 92653
714-770-1900
FAX 714-770-9585
TURPIN & RATTAN
REGISTERED PROFESSIONAL ENGINEER
NO. 014055
EXP. 12-31-96
ELECTRICAL
STATE OF CALIFORNIA
NOTES
1 NORMALLY OPEN
2 NORMALLY CLOSED
3 WILL CLOSE ONLY WHEN DWP LINE 1 OR LINE 2 FAILS.
4 WILL CLOSE ONLY WHEN DWP LINE 1 OR LINE 2 FAILS OR BOTH LINES FAIL.
SYMBOLS
50 INSTANTANEOUS OVERCURRENT RELAY
51 TIME OVERCURRENT RELAY
67 AC DIRECTIONAL OVERCURRENT RELAY
86 LOCKING OUT RELAY
47 PHASE SEQUENCE RELAY
27 UNDERVOLTAGE RELAY
59 OVERVOLTAGE RELAY
DRAWOUT VACUUM CIRCUIT BREAKER
CURRENT TRANSFORMER
138KV DWP LINE NO. 2
138KV DWP LINE NO. 1
66KV EDISON LINE
POSSIBLE FUTURE EDISON CONNECTION
DISCONNECT
UTILITY METER
GAS CIRCUIT BREAKER
40 MVA 138KV/12.4KV-7968V 3P 4W 60HZ OIL FILLED OUTDOOR
40 MVA 66KV/12.4KV-7968V 3P 4W 60HZ OIL FILLED OUTDOOR
1200/5 (1)
2000/5 (3)
2000A
5/5
XFMR TAP CHANGER
PHASE SHIFTER
TO SERVICE TRANSFORMER TAP CHANGER CONTROL PANEL
12.4KV SWITCHGEAR INDOOR TYPE
2000A CU 3P 4W 12.4KV BUS
800/5
5/5 AUX
1-PT 14,400-120V 6A
BUS POT. PILOT LIGHT
CLF
3 AUX. PTS 1/1
BLOWN FUSE INDICATOR
37.5KVA STATION SERVICE TRANSFORMER 12.4KV/240-120V
PANEL
HV SPLICING MANHOLE (TYPICAL OF 12)
12.4 PRIMARY SELECTIVE LOAD INTERRUPTOR SWITCH (TYPICAL OF 12) OUTDOOR TYPE
3000KVA 12.4KV/480-277V 3P 4W PAD MOUNTED OIL FILLED (TYPICAL OF 12) OUTDOOR TYPE
ELECTRICAL DISTRIBUTION SINGLE LINE
NO SCALE



SUBSTATION PLAN
SCALE: 1"=10'-0"

ABBREVIATIONS

GCB GAS CIRCUIT BREAKER
DS DISCONNECT SWITCH



SUBSTATION SECTION (1/1)
SCALE: 1"=10'-0"

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95-2125
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NO.	REVISIONS	DATE:

SCALE:
DATE:
JOB:

HARBOR GATEWAY CENTER
McDONNELL DOUGLAS REALTY
SUBSTATION LAYOUT

EXHIBIT #
E-4

HARBOR GATEWAY CENTER

EXHIBIT # E-5

PRELIMINARY OPINIONS OF PROBABLE ELECTRIC COSTS

Utility Specialists Southwest, Inc. has prepared preliminary opinions of probable electric costs for planning purposes only. Utility Specialists Southwest, Inc. cannot and does not guarantee that proposals, bids, and or construction costs will not substantially vary from the opinions that we have prepared.

COST DESCRIPTION	LADWP SYSTEM	EDISON SYSTEM	ELECTRIC CODE SYSTEM
Trench, Excavation, & Backfill	$ 464,300	$ 157,100	$ 163,100
Conduit	$ 118,500	$ 177,800	$ 367,100
Substructures	$ 693,500	$ 136,500	$ 166,500
TOTAL TRENCH & SUBSTRUCTURES	$ 1,524,900	$ 412,100	$ 507,400
Cable, Connections, & Equipment, Developer Systems	$ 1,903,900*	$ 1,591,300	$ 2,875,000
Substation for Developer System	N/A	$ 3,852,500	$ 3,852,500
SUBTOTAL CABLE & SUBSTATION COSTS	$ 1,903,900	$ 5,443,800	$ 6,727,500
TOTALS WITH SUBSTATION	**$ 3,428,800***	**$ 5,855,900**	**$ 7,234,900**
TOTALS WITHOUT SUBSTATION	**$ 3,428,800***	**$ 2,003,400**	**$ 3,382,400**

*(LADWP CABLE COSTS MAY BE REFUNDABLE)

Date: December 17, 1996
Owner: McDonnell Douglas Realty Company
Prepared by: Utility Specialists Southwest, Inc. and Turpin & Rattan Engineering, Inc.

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HARBOR GATEWAY CENTER

EXHIBIT # E-6

ESTIMATED ELECTRIC REVENUES FROM THE SALE OF ENERGY @ LADWP INDUSTRIAL RATE OF $0.0789/kW HOUR

MAXIMUM SIZE OF BUILDINGS	ASSUMED TYPE OF BUILDINGS	CONNECTED WATTS/SQ. FT.	TOTAL CONNECTED LOAD (kW)	UTILITY ESTIMATED DEMAND (kVA)		ESTIMATED ANNUAL REVENUE
985,900 sq. ft.	Industrial	25	24,648	11,240	$	2,250,000
985,900 sq. ft.	Commercial (High Rise)	15	14,789	4,634	$	750,000
985,900 sq. ft.	Commercial (Low Rise)	15	14,789	8,380	$	1,500,000
450,000 sq. ft.	Shopping Center			2,960	$	750,000
3,407,700 sq. ft.			**54,226**	**27,214**	**$**	**5,250,000**

Date: December 17, 1996
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HARBOR GATEWAY CENTER

EXHIBIT # T-1

TELECOMMUNICATIONS DESIGN PARAMETERS AND ASSUMPTIONS

PACIFIC BELL SYSTEM

- Traditional copper wire system installed in conduit. System Includes manholes, pedestals, and possibility of two serving area enclosures.
- Can tie into existing Pacific Bell system on either 190th Street or Normandie Avenue.
- If the site is developed in a fashion to allow a private electric system, Pacific Bell would probably apply the Minimum Point of Entry (MPOE) policy and require a payment for all cable work. Our cost opinion takes that approach.

GTE SMART-PARK® SELF-HEALING FIBER OPTIC SYSTEM

- Private system built under contract with GTE or to their model.
- Conduit system with fiber optic cable in ducts. System will require special terminals at the buildings and at the serving utilities central office.

PRIVATE (FOR-LEASE) CONDUIT DISTRIBUTION SYSTEM

- A basic conduit system with supporting structures that could be leased to any private telecommunications system provider.
- At least one duct as designed would have inter-duct installed to allow for the installation of private fiber cable.
- Depending on the option of the two preceding systems chosen, this system could be in direct competition with a Landlord owned system.
- No cable is included in the costs for this system since that would be provided by the lessee of the duct space.
- This system would be installed at the same time and in the same trench as the GTE fiber system and would be in addition to the conduits required by GTE.

Date: December 17, 1996
Owner: McDonnell Douglas Realty Company
Prepared by: Utility Specialists Southwest, Inc.

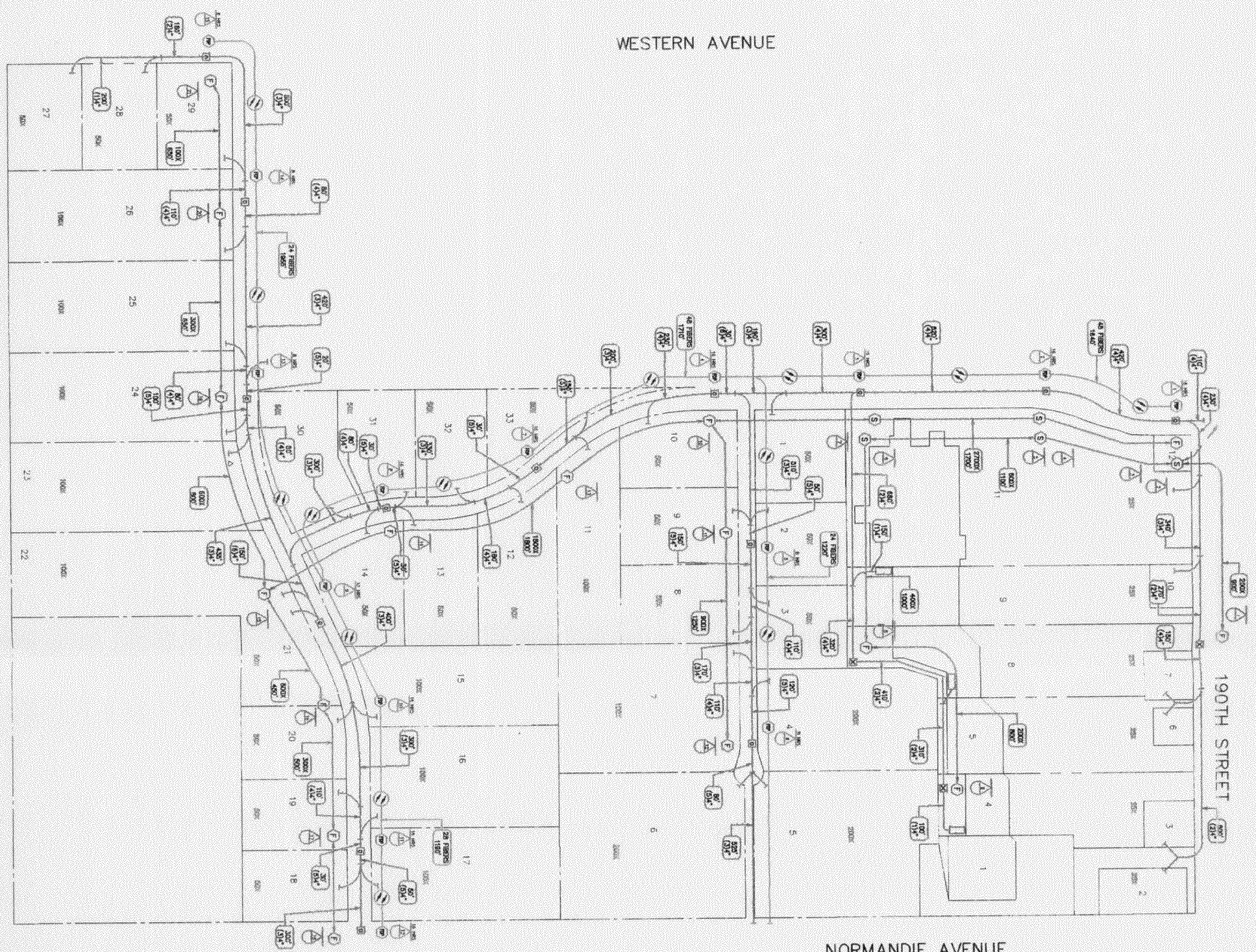

EXHIBIT # T-2

HARBOR GATEWAY CENTER

McDONNELL DOUGLAS REALTY

TELECOMMUNICATIONS SITE DISTRIBUTION DESIGNS

SCALE:	
DATE:	
JOB:	

NO.	REVISIONS	DATE:

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HARBOR GATEWAY CENTER

EXHIBIT # T-3

PRELIMINARY OPINIONS OF PROBABLE TELECOMMUNICATIONS COSTS

Utility Specialists Southwest, Inc. opinion of probable telecommunications costs is made on the basis of our experience and qualifications and represents our best judgment based on direction, plans, and information provided by the Client. Utility Specialists Southwest, Inc. cannot and does not guarantee that proposals, bids, and or construction costs will not vary from the opinions that we have prepared.

COST DESCRIPTION	PAC BELL SYSTEM	GTE SYSTEM	LEASE CONDUIT SYSTEM
Trench, Excavation, & Backfill	$ 157,100	$ 157,100	$ 157,100
Conduit	$ 49,300	$ 82,500	$ 49,300
Substructures	$ 65,000	$ 65,000	$ 65,000
Cable, Connections, & Equipment	$ 203,300*	$ 95,200	By Others
CIAC Tax	$ 67,100*	N/A	N/A
TOTALS	**$ 541,800**	**$ 398,800**	**$ 271,400**

* Not required from Developer if system in public streets

ADDITIONAL COSTS AND COMMENTS TO CONSIDER

- Fiber terminal at each building — $30,000 to $80,000 each
- Copper terminals at each building
  - 50X — $1,200 each
  - 100X — $1,925 each
- Above costs do not include any service costs from the street to the buildings.

Date: December 17, 1996
Owner: McDonnell Douglas Realty Company
Prepared by: Utility Specialists Southwest, Inc.

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APPENDIX I

GOODIN, MACBRIDE,
SQUERI, SCHLOTZ & RITCHIE, LLP

MEMORANDUM

TO: Frank Baker

FROM: J. Squeri/Goodin, MacBride, Squeri

DATE: December 16, 1996

SUBJECT: Direct Access/Municipal Utilities

Direct Access typically refers to mechanisms whereby electricity customers can contract directly with competitive providers of electric supply for electric energy that will then typically be transmitted/distributed by a traditional utility company for the customer's end use at its home, business, or industrial facility. This process of allowing customers to select their own supplier of electricity (as well as to aggregate loads for purposes of achieving economies of scale in purchasing supply necessary to meet expected demand) differs from the traditional electric market structure in which the utility (public or private) provides a bundled service which includes both the procurement of electric supply and its delivery to the end user. Direct Access is therefore intended to inject competitive, market forces into the world of electric supply; transmission and distribution of the competitively procured supply will remain an essentially monopoly-provided function (with some narrow exceptions) subject to utility-like regulation.

You have referenced a current redevelopment project which consists of a 170 acre manufacturing site that is currently served by LADWP from an onsite substation fed by a 138 kV transmission line. You have asked me to address the alternatives available to

project developers to either contract directly with competitive providers for supply of electricity to meet future demand at the site or to utilize the services of an energy broker to acquire the needed supply. In both cases, it is assumed that the acquired electric supply will be transmitted/delivered to the project site using transmission/distribution facilities of LADWP. (This memorandum does not address issues relating to ownership of the on-site electric infrastructure needed to provide individual electric service or what entity (LADWP or other) will be authorized to provide the local distribution service.)

The central question is whether LADWP will - like the privately-owned public utilities (PG&E, Edison, and SDG&E) will do by 1/1/98 - allow customers who are located within the LADWP service territory to have a Direct Access option to purchase their own electric supply themselves or through brokers.

AB 1890, the landmark legislation, overhauling the state's electric industry specifically requires the local regulatory body of each local publicly owned electric utility (including LADWP) to determine whether it will authorize direct transactions between electricity suppliers and end use customers (like the redevelopment project). While LADWP will be ultimately responsible for determining whether or not Direct Access should be allowed, the Legislature has clearly announced its preference for an electricity market structure which promotes competition in the supply of electric power and in which customers would be allowed to have the right to choose their supplier of electric power. In other words, it seems unfathomable that LADWP will not get around to implementing some form of a Direct Access program. The larger question is what kind of Direct Access program will LADWP implement and when.

If LADWP wants to recover its stranded investment costs (its uneconomic assets whose costs are higher than the market will allow recovery) - and it does - LADWP

will be required to implement a Direct Access program. If LADWP does not allow Direct Access, it will be ineligible to recover a variety of its stranded costs. So, LADWP will authorize Direct Access but when? AB 1890 essentially requires LADWP to authorize direct transactions no later than January 1, 2000.

The issues that LADWP faces in implementing a Direct Access program will be no different than those currently facing the CPUC which is designing the Direct Access program for PG&E, Edison, and SDG&E. The major issue is whether or not all customers should be eligible for Direct Access as soon as the program is implemented or whether there needs to be a phase-in (or rationing) of Direct Access eligibility because of system limitations. In the latter case, a huge political question arises as to which customers get to go first if Direct Access eligibility is phased-in. Right now, there appears to be a deadlock at the CPUC regarding the need for a phase-in ("go slow" approach).

There seems to be little controversy that a customer will be allowed to aggregate loads (in order to increase purchasing power) in an almost unlimited fashion - providing only that loads can be accurately measured, primarily for billing and collection purposes. There is, however, still controversy over the need for expensive, real-time metering capability for each end user as a prerequisite to implementation of Direct Access. The proponents of reliance on less technical solutions, such as use of load profiles rather than interval meters, seem to be carrying the day at the CPUC. We will not, however, know what the CPUC's Direct Access program will look like exactly until about mid-summer, 1997. Nevertheless, it is safe to say that whatever the CPUC Direct Access program looks like, the LADWP will follow suit and probably implement a similar program by 1/1/2000.